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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/777,957	02/13/2004	Paul Shirley	303.774US2	7102

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EXAMINER

CARRILLO, BIBI SHARIDAN

ART UNIT	PAPER NUMBER
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1746

DATE MAILED: 06/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/777,957

Applicant(s)

SHIRLEY ET AL.

Examiner

Sharidan Carrillo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 33-42, 55-62 and 69-82 is/are pending in the application.
- 4a) Of the above claim(s) 69-82 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 33-42 and 55-62 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 33-42, 55-62 and 69-82 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 34-39 and 55-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shuji (JP10-294261) in view of Maeda et al. (5330577).

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In reference to claims 33, 37, 55, 58, and 62, Shuji teaches washing the revolving front face of a spin chuck 11 with a rotating brush 51. Shuji teaches moving the brush in the vertical and horizontal direction by drive unit 53 which is operated by a controller. Shuji fails to teach vacuuming the contaminants through a cleaning head assembly.

Maeda et al. teach cleaning semiconductor fabrication equipment using brushes 20 having a suction duct 19 for removing contaminants from the surface (col. 3, lines 15-47). It would have been obvious to a person of ordinary skill in the art to have modified the brush of Shuji to include a suctioning duct for purposes of removing contaminants during the cleaning process. In reference to claims 34-36 and 56-57, Shuji teaches moving the brush in the vertical and horizontal direction. In reference to claims 38-39, it is notoriously well known in the art that chucks are made out of conventional materials, such as steel (Sada et al., 6062240).

5. Claims 40-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shuji (JP10-294261) in view of Maeda et al. (5330577), as applied to claims 33-39 and 55-62, as described in paragraph 5 above, and further in view of Su et al. (5507874).

Shuji et al. fail to teach the material used in the manufacture of the chuck. Su et al. teach a method of cleaning a chuck. In col. 2, lines 30-31, Su et al. teach that various insulating coatings such as polytetrafluoroethylene, ceramic, or diamond are used. It would have been obvious and within the level of the skilled artisan to have modified the method of Shuji to include conventional materials, as taught by Su et al., which are used in the manufacture of the chuck.

6. Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shuji (JP10-294261) in view of Maeda et al. (5330577), as applied to claims 33-39 and 55-62, as described in paragraph 5 above, and further in view of Satterfield et al. (5364144).

Shuji fail to teach the material used in the manufacture of the chuck. Satterfield et al. teach a wafer handling apparatus made of acetal (col. 9, claim 6). It would have been obvious and within the level of the skilled artisan to have modified the method of Shuji to include conventional materials, such as acetal, as taught by Satterfield et al., which are used in the manufacture of the wafer handling apparatus.

Response to Arguments

7. The rejections, under 112, first and second paragraphs, are withdrawn in view of the corrections and the arguments presented by applicant.

8. The 102 and 103 rejections are withdrawn in view of the newly amended claims. A new grounds of rejection has been introduced, for the reasons set forth above.

9. The restriction requirement is maintained for the reasons set forth in the previous office action. Applicant has already received an Office Action on the merits.

Additionally, the cleaning head assembly of claim 69 lacks positive antecedent basis.

Claims 69-82 will not be examined.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharidan Carrillo whose telephone number is 571-272-1297. The examiner can normally be reached on Monday-Friday, 6:00a.m-2:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on 571-272-1414. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sharidan Carrillo
Primary Examiner
Art Unit 1746

bsc


SHARIDAN CARRILLO
PRIMARY EXAMINER